U.S. Department of Transportation
Federal Aviation Administration

Advisory Circular

Subject:	IMPLEMENTATION OF 50 kHz/Y CHANNELS FOR ILS/VOR/DME	**Date:** July 30, 1992 Initiated by: ASM-500	**AC No:** **Change:**	AC 170-14	

1. **PURPOSE.** This circular advises aircraft owners,. operators, and radio equipment manufacturers of the FAA's continued implementation of 50 kHz/Y or split channel Instrument Landing System (ILS) and Very High Frequency Omnidirectional Range (VOR) frequency assignments.

2. **CANCELLATION.** Advisory Circular AC NO: AC 170-12, Subject: Implementation of 50 kHz/Y Channels for ILS/VOR/DME, dated October 7. 1970, is canceled.

3. **GENERAL.** The continuing requirement for expanding precision navigation services in all areas of the country has resulted in the need for more ILS facilities. Also, the need for new en route navigation facilities, and the realignment and restructuring of the air traffic flow patterns into and out of the major airports, requires that more services be available from the VOR system, These needs are resulting in acute frequency congestion in the ILS and VOR frequency bands, Frequency studies have been performed by the FAA and these clearly demonstrate that projected precision landing requirements cannot be satisfied without the use of 50 kHz VOR and ILS channels and the associated "Y" DME channels. The situation is critical in many areas of the country, in particular, east of the Mississippi River, California and Texas,

The shortage of available frequencies led to the implementation of 50 kHz/Y channel assignments. The first split channels were assigned in 1983, and since then over 50 assignments have been made for ILS and VOR locations. The existing FAA policy concerning the use of 50 kHz/Y channels was first published in the Federal Register on October 15, 1973, and provides in part that:

> FAA will continue to install new facilities (VOR/ILS/SDF/TACAN/DME) at 100 kHz frequency assignments unless frequency congestion necessitates the use of a 50 kHz frequency assignment in which case the facility will be installed at 50 kHz.

A proposed frequency change to an existing ILS or VOR facility, from a 100 kHz to a 50 kHz/Y channel, or the installation of a new navigational aid facility on a 50 kHz/Y channel, will be coordinated, where applicable, through airspace review, the user groups, and the airport owner or manager,

4. **AIRCRAFT EQUIPMENT.** This circular gives notice that aircraft, not configured with 200-channel NAVAID receivers, may not be able to receive full navigational services. The present 100-channel equipment has limited life expectancy depending on the area of use and services desired.

New 50 kHz/Y channels that are assigned have been engineered to protect the old 100-channel NAVAID receivers using the adjacent 100 kHz frequencies, This practice is continuing, and all presently assigned 50 kHz/Y frequencies meet this criteria. The FAA will continue this policy for the foreseeable future. However, there may be special site-specific cases where aircraft, using the adjacent facility, must be equipped with 200-channel equipment to receive full precision landing and en route navigation services.

5. **SUMMARY.** The FAA will continue to assign 50 kHz/Y or split channel ILS and VOR frequencies because of a nationwide problem of acute frequency congestion in these bands and the need for additional navigational aid services, Aircraft owners and users are hereby alerted that navigational aid receivers, which are not compatible with 50 kHz/Y channel operation, may not receive full en route or precision landing navigation services in certain areas of the country where frequency congestion is prevalent.

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